

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): An organic light emitting diode (OLED) characterized by combination of energy transfer and direct carrier recombination mechanisms ,

comprising:

a single universal host that includes 1, 2 or 3 [can be used for red, green and blue] dopants selected from the group consisting of a red dopant, a green dopant and a blue dopant dispersed throughout said host for full color display, as specified by the CIE for red, green and blue dopants;

a hole transporting layer;

an electron transport layer;

wherein said hole transporting layer and said electron transport layer are on opposing sides of said universal host, and are in electrical contact with said universal host;

wherein said hole transporting layer, said electron transport layer and said universal host comprises together an active emitting layer of said OLED;

electrodes on opposing sides of said active portion for providing a bias across said active portion[;], wherein at least one of said electrodes is transparent.

Claim 2 (original): The OLED of claim 1, wherein said universal host is a material adapted to emit at wavelengths in the blue visible light region or shorter.

Claim 3 (original): The OLED of claim 1, wherein said universal host is doped with a red emitting material.

Claim 4 (original; tentatively allowable): The OLED of claim 3, wherein said universal host comprises 5,5'-bis(dimesitylboryl)-2,2'-bithiophene, and wherein said red emitting material is 6,13-diphenylpentacene.

Claim 5 (original): The OLED of claim 1, wherein said universal host is doped with a green emitting material.

Claim 6 (original): The OLED of claim 5, wherein said universal host material is 5,5'-bis(dimesitylboryl)-2,2'-bithiophene, and wherein said green emitting material is N,N'-diethylquinacridone.

Claim 7 (original): The OLED of claim 1, wherein said universal host is doped with a blue emitting material.

Claim 8 (original): The OLED of claim 1, wherein said hole transporting layer is 4,4-bis(1-naphthylphenyl-amino)biphenyl.

Claim 9 (original): The OLED of claim 1, wherein said electron transport layer is 5,5'-bis(dimesitylboryl)-2,2'-bithiophene.

Claim 10 (original): The OLED of claim 1, wherein at least one of said transparent electrodes comprises a glass substrate coated with a transparent anode material.

Claim 11 (original): The OLED of claim 10, wherein said transparent anode material is indium tin oxide.

Claim 12 (original): The OLED of claim 1, wherein one of said electrodes comprises a metallic cathode.

Claim 13 (previously presented): The OLED of claim 12, wherein said metallic cathode comprises an alloy of Mg and Ag.

Claim 14 (original): The OLED of claim 1, wherein a hole blocking layer is inserted between said universal host and said electron transport layer, and wherein said hole blocking layer, said hole transporting layer, and said electron transport layer are in electrical contact with said universal host;

Claim 15 (previously presented): The OLED of claim 14, wherein said hole blocking layer comprises bathocuproine.

Claim 16 (previously presented): An organic light emitting diode (OLED), comprising:

- a hole transporting layer ;

- an electron transport layer that is also a single universal host that can be used for red, green and blue dopants ;

- wherein said hole transporting layer and said electron transport layer are placed in series, and are in electrical contact with each other;

- wherein said hole transporting layer and said electron transport layer together comprise an active portion of said OLED;

- electrodes on opposing sides of said active portion for providing a bias across said active portion;

- wherein at least one of said electrodes is transparent.

Claim 17 (original): The OLED of claim 16, wherein said electron transport layer is a material adapted to emit at wavelengths in the blue visible light region or shorter.

Claim 18 (original): The OLED of claim 16, wherein said electron transport layer is doped with

a red emitting material.

Claim 19 (original): The OLED of claim 18, wherein said red emitting material is 6,13-diphenylpentacene.

Claim 20 (original): The OLED of claim 16, wherein said electron transport layer is doped with a green emitting material.

Claim 21 (original): The OLED of claim 20, wherein said green emitting material is N,N'-diethylquinacridone.

Claim 22 (original): The OLED of claim 16, wherein said electron transport layer is doped with a blue emitting material.

Claim 23 (original; tentatively allowable): The OLED of claim 16, wherein said hole transporting layer is 4,4-bis(1-naphthylphenyl-amino)biphenyl.

Claim 24 (original): The OLED of claim 16, wherein said electron transport layer is 5,5'-bis(dimesitylboryl)-2,2'-bithiophene.

Claim 25 (original): The OLED of claim 16, wherein at least one of said transparent electrodes comprises a glass substrate coated with a transparent anode material.

Claim 26 (original): The OLED of claim 25, wherein said transparent anode material is indium tin oxide.

Claim 27 (canceled)

Claim 28 (canceled)

Claim 29 (previously presented): An organic light emitting diode (OLED), comprising:
a hole transporting layer that is also a single universal host that can be used for red, green and blue dopants ;

an electron transport layer;
wherein said hole transporting layer and said electron transport layer are placed in series,
and are in electrical contact with each other;
wherein said hole transporting layer and said electron transport layer together comprise
an active portion of said OLED;
electrodes on opposing sides of said active portion for providing a bias across said active
portion;
wherein at least one of said electrodes is transparent.

Claim 30 (original): The OLED of claim 29, wherein said hole transporting layer is a material adapted to emit at wavelengths in the blue visible light region or shorter.

Claim 31 (original): The OLED of claim 29, wherein said hole transporting layer is doped with a red emitting material.

Claim 32 (original): The OLED of claim 31, wherein said red emitting material is 6,13-diphenylpentacene.

Claim 33 (original): The OLED of claim 29, wherein said hole transporting layer is doped with a green emitting material.

Claim 34 (original): The OLED of claim 33, wherein said green emitting material is N,N'-diethylquinacridone.

Claim 35 (original): The OLED of claim 29, wherein said hole transporting layer is doped with a blue emitting material.

Claim 36 (original): The OLED of claim 29, wherein said hole transporting layer is 4,4-bis(1-naphthylphenyl-amino)biphenyl.

Claim 37 (original): The OLED of claim 29, wherein said electron transport layer is 5,5'-bis(dimesitylboryl)-2,2'-bithiophene.

Claim 38 (original): The OLED of claim 29, wherein at least one of said transparent electrodes comprises a glass substrate coated with a transparent anode material.

Claim 39 (original): The OLED of claim 38, wherein said transparent anode material is indium tin oxide.

Claim 40 (canceled)

Claim 41 (canceled)

Claim 42 (previously presented): An organic light emitting diode (OLED) comprising:
a single universal host that can be used for red, green and blue dopants having carrier transport properties.

Claim 43 (previously presented): The OLED of claim 42, wherein said universal host is doped with a red emitting material.

Claim 44 (previously presented): The OLED of claim 43, wherein said universal host is a material adapted to emit at wavelengths in the blue visible light region or shorter and comprises 5,5'-bis(dimesitylboryl)-2,2'-bithiophene, and wherein said red emitting material is 6,13-diphenylpentacene.

Claim 45 (previously presented): The OLED of claim 42, wherein said universal host is doped with a green emitting material.

Claim 46 (previously presented): The OLED of claim 45, wherein said universal host material is 5,5'-bis(dimesitylboryl)-2,2'-bithiophene, and wherein said green emitting material is N,N'-diethylquinacridone.

Claim 47 (previously presented): The OLED of claim 42, wherein said universal host is doped with a blue emitting material.

Claim 48 (previously presented): The OLED of claim 42, wherein said hole transporting layer is 4,4-bis(1-naphthylphenyl-amino)biphenyl.

Claim 49 (previously presented): The OLED of claim 42, wherein said electron transport layer is 5,5'-bis(dimesitylboryl)-2,2'-bithiophene.

Claim 50 (previously presented): The OLED of claim 44, wherein at least one of said [transparent] electrodes comprises a glass substrate coated with a transparent anode material.

Claim 51 (previously presented): The OLED of claim 50, wherein said anode material is indium tin oxide.

Claim 52 (previously presented): The OLED of claim 44, wherein one of said electrodes comprises a metallic cathode.

Claim 53 (previously presented): The OLED of claim 52, wherein said metallic cathode comprises an alloy of Mg and Ag.

Claim 54 (previously presented) The OLED of claim 44, wherein a hole blocking layer is inserted between said universal host and said electron transport layer, and wherein said hole blocking layer, said hole transporting layer, and said electron transport layer are in electrical contact with said universal host;

Claim 55 (previously presented): The OLED of claim 54, wherein said hole blocking layer comprises bathocuproine.